AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions of claims in the application.

LISTING OF CLAIMS:

1. (Original) An aldehyde having the formula:

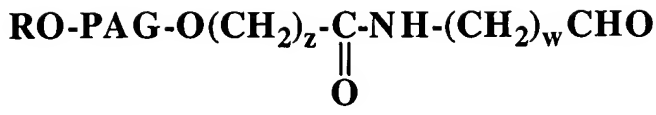
$$RO\text{-}PAG\text{-}O(CH_2)_z(Y)_m\text{-}\underset{\underset{O}{\|}}{C}\text{-}X(CH_2)_wCHO \qquad \textbf{IA}$$

wherein R is hydrogen or lower alkyl, X and Y are individually selected from –O - or - NH- with the proviso that X is NH when m is 1 and Y is –O-, PAG is a divalent residue of polyalkylene glycol resulting from removal of the terminal hydroxy groups and having a molecular weight of from about 1,000 to about 100,000 Daltons, z is an integer of from 2 to 4, m is an integer of from 0 to 1, and w is an integer of from 2 to 8, wherein the aldehyde group is free or protected with a hydrolyzable aldehyde protecting group, or a hydrate thereof.

2. (Original) The aldehyde of claim 1 wherein said residue is formed from polyethylene glycol.

3. (Original) The aldehyde of claim 2 wherein the residue has a molecular weight of 5,000 to 50,000 Daltons.

4. (Original) The aldehyde of claim 1 wherein said aldehyde has a formula:



I-Ai

wherein R, PAG, and w are as above, and z is an integer of from 1 to 4

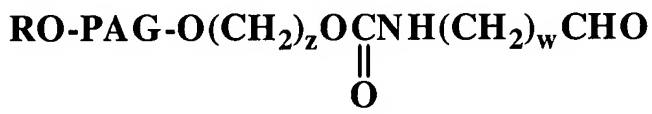
5. (Original) The aldehyde of claim 4 wherein said divalent residue is polyethylene glycol.

6. (Original) The aldehyde of claim 5 wherein the residue has a molecular weight of 5,000 to 50,000 Daltons.

7. (Original) The aldehyde of claim 6 wherein R is methyl and the molecular weight of the residue is about 10,000 Daltons.

8. (Original) The aldehyde of claim 6 wherein R is methyl, and the molecular weight of the residue is 20,000 Daltons.

9. (Original) The aldehyde of claim 1 wherein said aldehyde has the formula:



I-Aii.

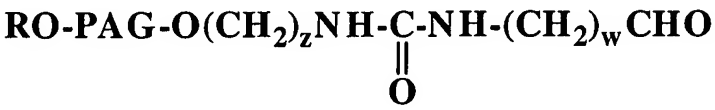
wherein R, PAG, and w are as above, and z is an integer of from 2 to 4

10. (Original) The aldehyde of claim 9 wherein said divalent residue is formed from polyethylene glycol.

11. (Original) The aldehyde of claim 10 wherein the residue has a molecular weight of 5,000 to 50,000 Daltons.

12. (Original) The aldehyde of claim 11 wherein R is methyl and said residue has a molecular weight of 10,000 Daltons.

13. (Original) The aldehyde of claim 1 having the formula:



I-Aiii

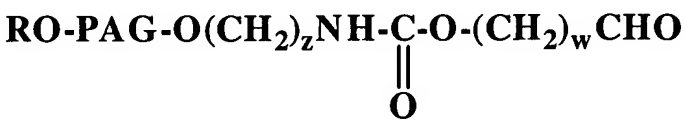
wherein R, PAG, and w are as above, and z is an integer of from 2 to 4.

14. (Original) The aldehyde of claim 13 wherein said divalent residue is polyethylene glycol.

15. (Original) The aldehyde of claim 14 wherein the residue has a molecular weight of 5,000 to 50,000 Daltons.

16. (Original) The aldehyde of claim 15 wherein R is methyl and the molecular weight of the residue is 10,000 Daltons.

17. (Original) The aldehyde of claim 1 having the formula:



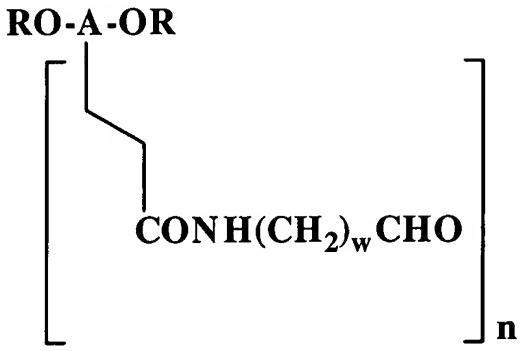
wherein R, PAG, and w are as above, and z is an integer of from 2 to 4. **I-Aiv**

18. (Original) The aldehyde of claim 17 wherein said divalent residue is formed from polyethylene glycol.

19. (Original) The compound of claim 18 wherein the residue has a molecular weight of 5,000 to 10,000 Daltons.

20. (Original) The aldehyde of claim 19 wherein R is methyl and the molecular weight of the residue is 10,000 Daltons.

21. (Original) An aldehyde of the formula:



IB

wherein R is hydroxyl or lower alkyl, A is a polyethylene glycol residue with its two terminal hydroxy groups being removed having a molecular weight of from 1,000 to 100,000 Daltons and having a valence of from 1 to 5, n is an integer of from 1 to 5 which integer is the same as the valence of A, and w is an integer from 2 to 8.

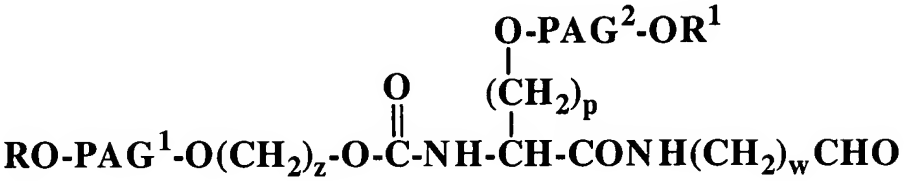
22. (Original) The aldehyde of claim 21 wherein A is a residue having a molecular weight of from 5,000 to 50,000 Daltons.

23. (Original) The aldehyde of claim 22 where n is 1.

24. (Original) The aldehyde of claim 23 where the R is methyl and A has a molecular weight of about 20,000 Daltons.

25. (Original) The aldehyde of claim 23 wherein R is methyl and A has a molecular weight of 10,000 Daltons.

26. (Original) An aldehyde of the formula:



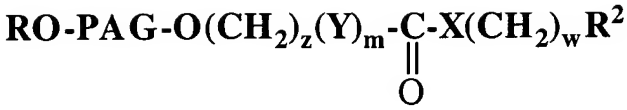
IC

wherein PAG^1 and PAG^2 are independently divalent residues of poly lower alkylene glycol resulting from removal of the two terminal hydroxy groups with the PAG^1 and PAG^2 residues having a combined molecular weight of from 1,000 to 100,000 Daltons, R and R^1 are individually lower alkyl or hydrogen, z is an integer of from 2 to 4, p is an integer of from 2 to 5, and w is an integer of from 2 to 8, wherein the aldehyde group is free or protected with a hydrolyzable aldehyde protecting group, or a hydrate thereof.

27. (Original) The aldehyde of claim 26 wherein said R is methyl, PAG^1 and PAG^2 are formed from polyethylene glycol residues.

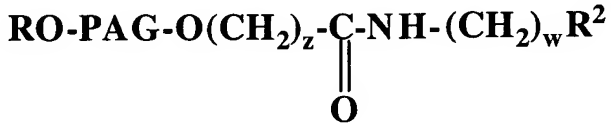
28. (Original) The aldehyde of claim 27 wherein R is methyl and PAG^1 and PAG^2 both have a molecular weight of 5,000 to 50,000 Daltons.

29. (Original) A compound of the formula:



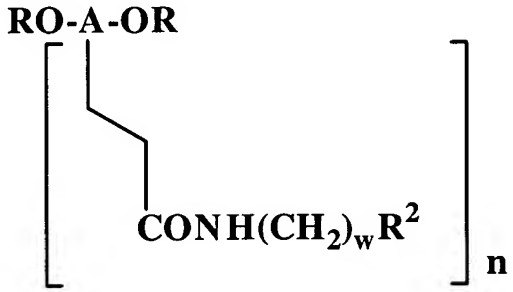
wherein R is hydrogen or lower alkyl, R^2 is -$CH(OH)CH(OH)R_{13}$ wherein R_{13} is hydrogen, alkyl, or phenyl, X and Y are individually selected from -O- or -NH- with the proviso that X is NH when m is 1 and Y is -O-, PAG is a divalent residue of polyalkylene glycol resulting from removal of the terminal hydroxy groups and having a molecular weight of from about 1,000 to about 100,000 Daltons, z is an integer of from 2 to 4, m is an integer of from 0 to 1, and w is an integer of from 2 to 8.

30. (Original) The conjugate of claim 29 where said conjugate has the formula:



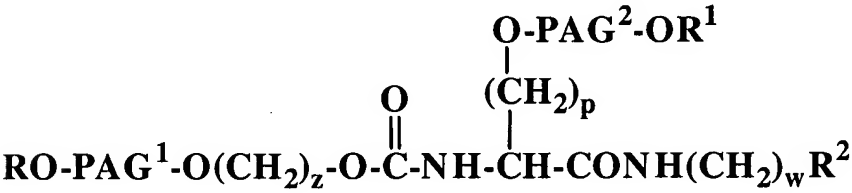
wherein PAG, R, R^2, z and w are as above.

31. (Original) A compound of the formula:



wherein R is hydrogen or lower alkyl, R^2 is - $CH(OH)CH(OH)R_{13}$ wherein R_{13} is hydrogen, alkyl, or phenyl, A is a polyethylene glycol residue with its two terminal hydroxy groups being removed having a molecular weight of from 1,000 to 100,000 Daltons and having a valence of from 1 to 5, n is an integer of from 1 to 5 which integer is the same as the valence of A, and w is as integer of from 2 to 8.

32. (Original) A compound of the formula:



wherein PAG^1 and PAG^2 are independently divalent residues of poly lower alkylene glycol resulting from removal of the two terminal hydroxy groups with the PAG^1 and PAG^2 residues having a combined molecular weight of from 1,000 to 100,000 Daltons, R and R^1 are individually lower alkyl or hydrogen, R^2 is $CH(OH)CH(OH)R_{13}$ wherein R_{13} is hydrogen, alkyl, or phenyl, w is an integer from 2 to 8, p is an integer of from 2 to 5, and z is an integer of from 2 to 4.

33. (Original) A compound of the formula:

$$RO\text{-}PAG\text{-}O(CH_2)_z\text{-}O\text{-}(CH_2)_w\text{-}R^2$$

wherein R is lower alkyl or hydrogen, R^2 is -$CH(OH)CH(OH)R_{13}$ wherein R_{13} is hydrogen, alkyl, or phenyl, PAG is the divalent residue of polyethylene glycol resulting from removal of the two terminal hydroxy groups having a molecular weight of from 1,000 to 100,000 Daltons, z is a integer of from 2 to 4 and w is an integer of from 2 to 8.

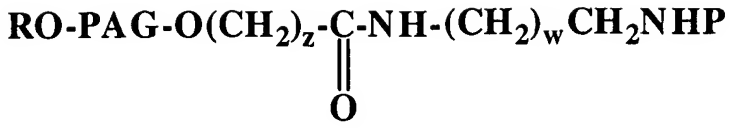
34. (Original) A conjugate of the formula:

$$RO\text{-}PAG\text{-}O(CH_2)_z(Y)_m\text{-}\underset{\underset{O}{\|}}{C}\text{-}X\text{-}(CH_2)_wCH_2NHP$$

III-A

wherein P is the residue of a protein with its amino group removed, R is hydrogen or lower alkyl, X and Y are individually selected from -O- or -NH with the proviso that X is NH when Y is –O-, PAG is a divalent residue of polyalkylene glycol resulting from removal of the terminal hydroxy groups, having a molecular weight of from 1,000 to 100,000 Daltons, z is an integer of from 2 to 4, m is an integer of from 0 to 1, and w is an integer of from 2 to 8.

35. (Original) The conjugate of claim 34 where said conjugate has the formula:



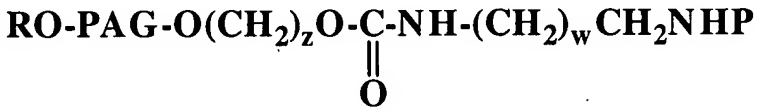
III-E

wherein P, R, PAG, z and w are as above.

36. (Original) The conjugate of claim 35 wherein PAG is formed from polyethylene glycol having a molecular weight of from 5,000 to 50,000.

37. (Original) The conjugate of claim 36 where said P is G-CSF, EPO, IFN-α, IFN-β or Hemoglobin.

38. (Original) The conjugate of claim 34 wherein said conjugate has the formula:



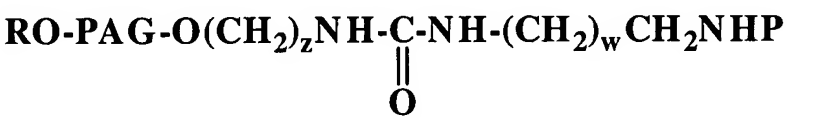
III-F

wherein P, R, PAG, and w are as above, and z is an integer of from 2 to 4.

39. (Original) The conjugate of claim 38 wherein PAG is polyethylene glycol having a molecular weight of from 5,000 to 50,000.

40. (Original) The conjugate of claim 39 where said P is G-CSF, EPO, IFN-α, IFN-β or Hemoglobin.

41. (Original) The conjugate of claim 34 wherein said conjugate has the formula:



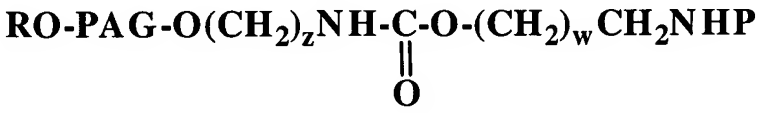
III-G

wherein P, R, PAG, and w are as above, and z is an integer of from 2 to 4.

42. (Original) The conjugate of claim 41 wherein PAG is polyethylene glycol having a molecular weight of from 5,000 to 50,000.

43. (Original) The conjugate of claim 42 where said P is G-CSF, EPO, IFN-α, IFN-β or Hemoglobin.

44. (Original) The conjugate of claim 34 wherein said conjugate has the formula:



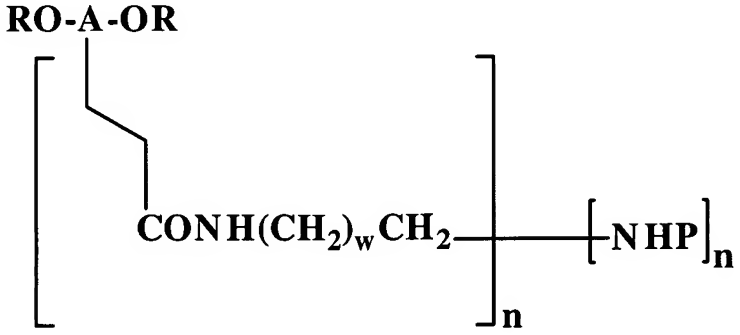
III-H

wherein P, R, PAG, and w are as above, and z is an integer of from 2 to 4.

45. (Original) The conjugate of claim 44 wherein PAG is polyethylene glycol having a molecular weight of from 5,000 to 50,000 Daltons.

46. (Original) The conjugate of claim 45 where said P is G-CSF, EPO, IFN-α, IFN-β or hemoglobin.

47. (Original) A conjugate of the formula:



III-B

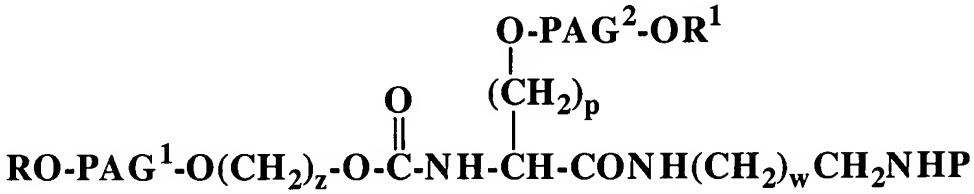
wherein P is a residue of a protein with its amino group removed, R is hydrogen or lower alkyl, A is a polyethylene glycol residue with its two terminal hydroxy groups being removed having a molecular weight of from 1,000 to 100,000 Daltons and having a valence of from 1 to 5, n is an integer of from 1 to 5 which integer is the same as the valence of A, and which integer is the same as the number of proteins P, w is as above.

48. (Original) The conjugate of claim 47 where n is 1.

49. (Original) The conjugate of claim 47 where A is polyethylene glycol residue.

50. (Original) The conjugate of claim 49 wherein PAG is polyethylene glycol having a molecular weight of from 5 to 50,000 Daltons.

51. (Original) A conjugate with the formula:



III-C

wherein P is a residue of a protein with its amino group being removed, PAG^1 and PAG^2 are independently divalent residues of poly lower alkylene glycol resulting from removal of the two terminal hydroxy groups and with the PAG^1 and

PAG^2 residues having a combined molecular weight of from 1,000 to 100,000 Daltons, R and R^1 are individually lower alkyl or hydrogen, w is an integer of from 2 to 8, p is an integer of from 2 to 5, and z is an integer of from 2 to 4.

52. (Original) The conjugate of claim 51 where PAG^1 and PAG^2 are each polyethylene glycol having a combined molecular weight from 5,000 to 50,000.

53. (Original) A conjugate of the formula:

$$\mathbf{RO\text{-}PAG\text{-}O(CH_2)_zO\text{-}(CH_2)_wCH_2NHP}$$

III-D

wherein P is a residue of a protein with an amino group being removed, PAG is a divalent residue of a poly lower alkylene glycol resulting from removal of the two terminal hydroxy groups having a molecular weight of from 1,000 to 100,000 Daltons, R is lower alkyl or hydrogen, w is an integer from 2 to 8 and z is an integer from 2 to 4.

54. (Original) The conjugate of claim 53 where PAG is a polyethylene glycol residue.

55. (Original) The conjugate of claim 54 where PAG has a molecular weight of from 5,000 to 50,000 Daltons.

Claims 56-59. (Canceled)

Claims 60-63. (Previously Canceled)

64. (Original) The conjugate of the formula:

$$RO\text{-}PAG\text{-}OCH_2\text{-}\underset{\underset{O}{\|}}{C}\text{-}NH\text{-}(CH_2)_wCH_2NHP \qquad \text{I-Ai}$$

wherein R is hydrogen or lower alkyl, PAG is a divalent residue of polyalkylene glycol resulting from removal of the terminal hydroxy groups and having a molecular weight of from 1,000 to 100,000 Daltons, and w is an integer of from 2 to 8.

65. (Original) The aldehyde of claim 64 wherein said divalent residue is polyethylene glycol.

66. (Original) The aldehyde of claim 65 wherein the residue has a molecular weight of 5,000 to 50,000 Daltons.

67. (Original) The aldehyde of claim 66 wherein R is methyl, and the molecular weight of the residue is about 10,000 Daltons.

68. (Original) The aldehyde of claim 67 wherein R is methyl, and the molecular weight of the residue is about 20,000 Daltons.

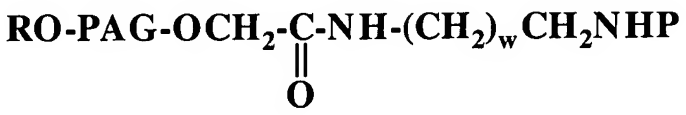
69. (Original) The conjugate of the formula:

$$RO\text{-}PAG\text{-}OCH_2\text{-}\underset{\underset{O}{\|}}{C}\text{-}NH\text{-}(CH_2)_wR_2$$

wherein PAG is a divalent residue of polyalkylene glycol resulting from removal of the terminal hydroxy groups and having a molecular weight of from 1,000 to 100,000 Daltons,

R is lower alkyl or hydrogen, R^2 is $CH(OH)CH(OH)R_{13}$ wherein R_{13} is hydrogen, alkyl, or phenyl, and w is an integer of from 2 to 8 and are as above.

70. (Original) The conjugate of the formula:



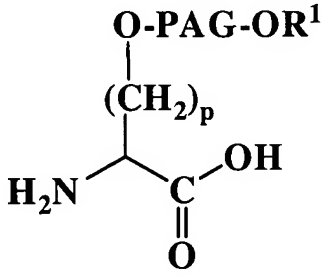
III-E

wherein P is a residue of a protein with its amino group being removed, R is hydrogen or lower alkyl, PAG is a divalent residue of polyalkylene glycol resulting from removal of the terminal hydroxy groups, having a combined molecular weight of from 1,000 to 100,000 Daltons, w is an integer of from 2 to 8 and are as above.

71. (Original) The conjugate of claim 70 wherein PAG is formed from polyethylene glycol having a molecular weight of from 5,000 to 50,000

72. (Original) The conjugate of claim 70 where P is G-CSF, EPO, IFN-α, IFN-β or Hemoglobin.

73. (Original) A compound of the formula:



wherein R^1 is lower alkyl, or hydrogen, PAG is a divalent residue of polyalkylene glycol resulting from removal of the terminal hydroxy groups, having a combined molecular weight of from 1,000 to 100,000 Daltons, and p is an integer of from 2 to 5.

74. (Original) The conjugate of claim 73 wherein PAG is formed from polyethylene glycol having a molecular weight of from 5,000 to 50,000.